Bench Mark: Aluminum tablet on Southwest wingwall of S.N. 095-0028 17.08' Right of Station 689+05.82 Elevation 428.25.

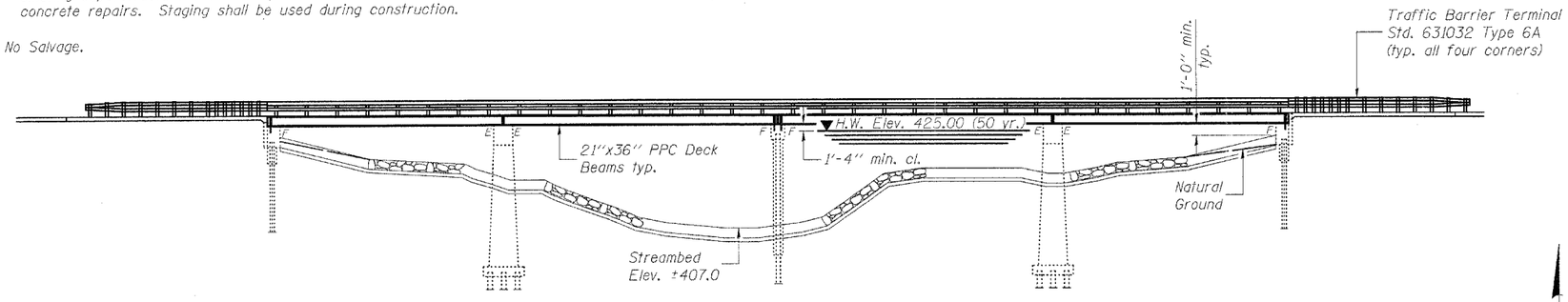
Existing Structure: S.N. 095-0028 was built in 1932 as S.B.I. Rte. 153 Sec. 106B&C at Sta. 690+00.00. In 1971 the superstructure was replaced, the substructure widened, and Pier 2 was added. The existing four span structure consists of PPC deck beams on pile bent abutments, solid stem piers on pile footings, and a wall type pier on pile. The bk. to bk. abutments dimension measures 189'-0" while the 0.-0. width measures 33'-0". The existing superstructure shall be replaced with PPC deck beams, and the substructure will be repaired with formed concrete repairs. Staging shall be used during construction.

No Salvage.

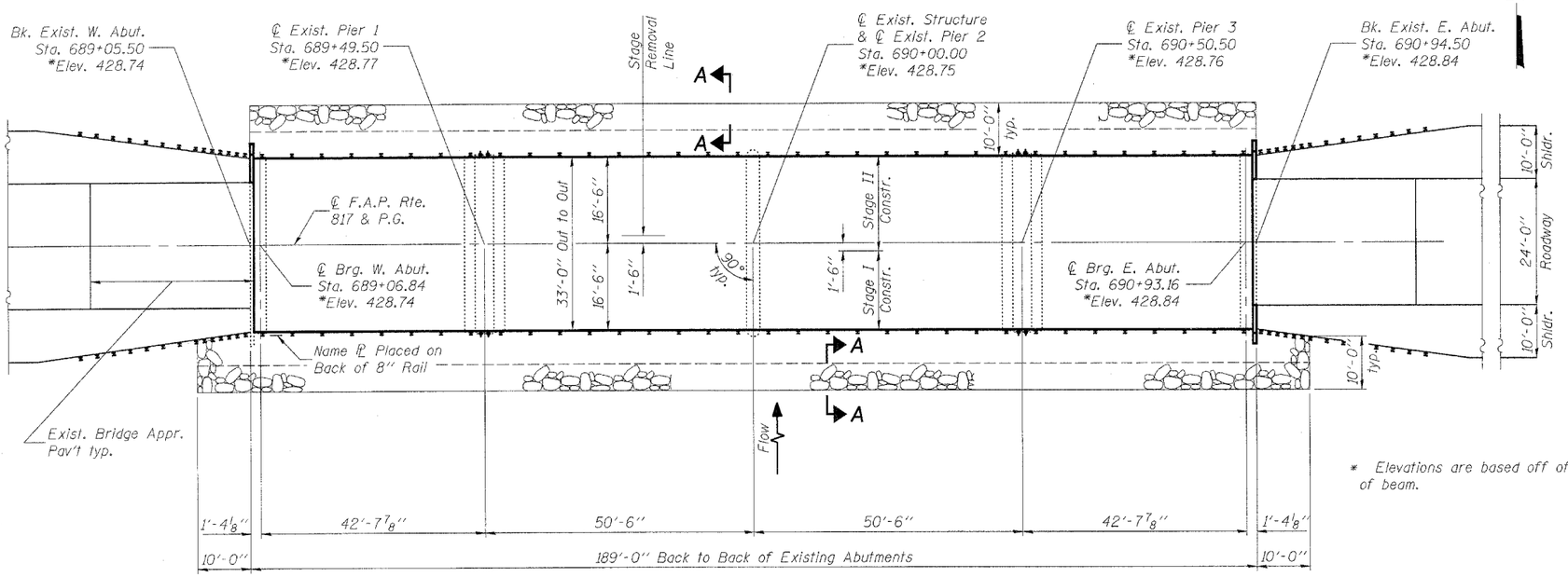
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON		10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
14 SHEETS



ELEVATION



* Elevations are based off of existing bottom of beam.

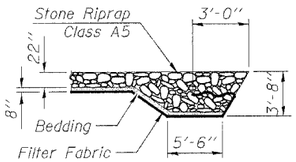
PLAN

STATION 690+00.00
REBUILT 200 BY
STATE OF ILLINOIS
FAP RT 817 - SEC 106BR-1
LOADING HS20
STR. NO. 095-0028

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plates.



SECTION A-A

WATERWAY INFORMATION

Drainage Area = 54.2 sq. mi. Low Grade Elev. 427.50 @ Sta. 699+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	-	-	-	-	-	-	-	-
Design	50	7,540	1,522	1,522	425.00	0.6	0.6	425.60	425.60
Base	100	8,610	1,665	1,665	425.80	0.7	0.7	426.50	426.50
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	11,200	1,772	1,772	427.50	1.4	1.4	428.90	428.90

LOADING HS20-44 (New Construction)

No Allowance for future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (½"Ø low lax. strands)
f_{si} = 201,960 psi (½"Ø low lax. strands)

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

STATE OF ILLINOIS
ERIC M. LAGEMANN
LICENSE NO. 081-006124
REGISTERED STRUCTURAL ENGINEER

Eric Lagemann 8/15/05
Expires 11/30/2006

GENERAL NOTES

Expansion guards which are not cast in the precast unit shall be fabricated and erected according to Article 503.10(c) of the Standard Specifications and are included in quantity of structural steel.

The minimum thickness of Bituminous overlay shall be 2" and varies as required to adjust for the new profile grade and beam camber.

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of ¼".

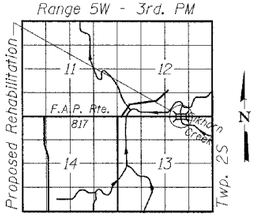
All Construction joints shall be bonded.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in a deteriated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		1137	1137
Filter Fabric for use with Riprap	Sq. Yd.		1137	1137
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.9	0.9
Preformed Joint Seal 4"	Foot	66.0		66.0
Concrete Structures	Cu. Yd.		0.9	0.9
Concrete Superstructure	Cu. Yd.	3.0		3.0
Formed Concrete Repair (Depth Equal to or less than 5")	Sq. Ft.		223.6	223.6
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	6168		6168
Furnishing and Erecting Structural Steel	Pound	5170		5170
Reinforcement Bars, Epoxy Coated	Pound	410	90	500
Steel Bridge Rail, Type SM	Foot	378		378
Name Plates	Each	1		1
Bar Splicers	Each	12		12
Waterproofing Membrane System	Sq. Yd.	693		693
Bituminous Concrete Surface Coarse, Superpave, Mix "C", N70	Ton	87		87
PC Mortar Fairing Course	Foot	1875		1875



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 15 OVER
ELKHORN CREEK
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028